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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,120

01/25/2006

Ermanno Filippi

9526-71

3688

30448

7590

09/15/2008

AKERMAN SENTERFITT

P.O. BOX 3188

WEST PALM BEACH, FL 33402-3188

EXAMINER

BHAT, NINA NMN

ART UNIT

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/566,120	<b>Applicant(s)</b> FILIPPI ET AL.	
	<b>Examiner</b> N. Bhat	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1-25-06</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. Applicant is required to include in the continuity section of the specification, usually on Page 1, line 1, that "This application is a 371 of PCT/EP04/14520, filed December 12, 2004".
2. The abstract of the disclosure is objected to because the abstract submitted is the full page of the WIPO document including WIPO information and Figure. A new abstract without the extraneous Figure and indicia on a separate page following the claims is required. The abstract should be directed to the claimed invention. The abstract itself, without the other indicia will satisfy the abstract requirements and need only be placed on a separate page following the claims. Correction is required. See MPEP § 608.01(b).
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Ruppel et al., EP 0534195 (Machine translation of Abstract and Detailed Description).

Ruppel et al. teach a reactor for carrying out heterogeneous catalytic reactions. The reactor is a cylindrical shaped vessel or housing. Contained within the housing is catalyst bed (01) is disposed radially with respect to the longitudinal axis of the reactor. Disposed within the catalyst bed (01), which is a reaction zone, are heat exchanger tubes (02) are coiled tubes (03)

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which has heat transfer medium flowing there through to remove the reaction heat liberated during reaction. [Note Figure 2 and the translated abstract and Page 2, Machine translation paragraphs 10-12] The reactor as taught and described by Ruppel et al. fully anticipates applicant's claims as presently drafted.

5. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Shell Canada, WO 94,12274.

Shell Canada teaches a reactor having a cylindrically shaped housing (1). Disposed within the housing is a reaction zone (2) for retaining a bed of catalyst and a plurality of heat exchange means (3,4) within the reaction zone. The reactor is fully capable of carrying out both exothermic and endothermic reactions. The heat exchange means as described by Shell Canada are spiral-wound heat exchange means 3 and 4 as shown in Figure 2. The spiral wound heat exchange means (3) is offset by 180° about the vertical axis (50) with respect to the heat exchange means (4). [Note the abstract, Figures 1-3, and Page 8, line 8-35] The Shell Canada reactor fully anticipates applicant's reactor as presently drafted.

6. Claims 1-12 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Filippi et al., US Paten 6,926,873.

The applied reference has a common inventor(s) with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Filippi et al. teach a reactor which includes a cylindrical shell, reaction zone, and at least one heat exchange unit supported in the reaction zone comprising a plurality of heat exchangers

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wherein at least one of the heat exchangers consist of a coil obtained from a single tubular element and has substantially parallelepiped, flattened overall dimension. [See, Filippi et al. Figure 1, the cylindrical shell(2), catalytic bed or reaction zone (3) Heat exchanger (13) disposed within the reaction zone or bed (3), in the form of a spiral coil and Column 7, lines 38-52] Filippi et al. fully anticipate applicant's claims as presently drafted.

7. Claims 1-12 are rejected under 35 U.S.C. 102(e) as being anticipated by clearly anticipated by Filippi et al., US Patent 6,939,520

The applied reference has a common inventor(s) with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Filippi et al. teach in Figures 1, an outer shell (2) which is cylindrical shape inside which includes a catalytic bed (3) which is housed within the cylindrical shell, further disposed within the reaction zone are tubes (heat exchanger tubes) for heating and cooling the reactor which are flattened spirally or coiled tubes.(13)[Note the Figures as well as Column 6, lines 28-67]. In figure 6, Filippi et al. teach that the reactor operates in isothermal conditions. The reactor as described by Filippi can be used in carrying out essentially all kinds of exothermic or endothermic reactions. The reactor as claimed fully anticipates applicant's claims as presently drafted.

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined

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application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-12 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,926,873. Although the conflicting claims are not identical, they are not patentably distinct from each other because the difference between the instant application and that of the '873 patent is that the claims of the instant invention are broader in scope than that claimed in the '873 patent, specifically the '873 patent includes that the catalyst is disposed within a perforated tube whereas in the instant invention the perforated tube is not required for the catalyst bed, and has been broadly claimed as a reaction zone. Both reactors as claimed in the instant application and that of the '873 patent are drafted with comprising or open language and therefore to exclude the perforated pipe or include the perforated pipe within the reactor would have been obvious to one having ordinary skill in the art at the time the invention was made.

10. Claims 1-12 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,939,502. Although the conflicting claims are not identical, they are not patentably distinct from each other because both the instant application and that of the '502 patent claim a reactor which includes a vertical outer cylindrical shell housing, a catalytic bed or reaction zone provided in the shell, and heat exchange means passing through the catalytic bed, the heat exchange means include tubes

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which are helicoidal. The reactors as described in both the instant application and that of the '502 are essentially the same, both reactors as claimed in the instant application and that of the '502 patent are drafted with comprising or open language and therefore to exclude the perforated pipe or include the perforated pipe within the reactor would have been obvious to one having ordinary skill in the art at the time the invention was made.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Brant -GB1270568 teach a cylindrical housing which includes disposed within the housing a heating coil formed of four separate tubular concentric coils.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Bhat whose telephone number is 571-272-1397. The examiner can normally be reached on Monday-Friday, 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. Bhat/  
Primary Examiner, Art Unit 1797